

**REMARKS**

Claims 1, and 4-13 are currently pending in the application. No claims are amended, added, or canceled by this response. Reconsideration of the rejected claims in view of the following remarks is respectfully requested.

**Information Disclosure Statement**

Applicants submit herewith a Completion of Record, citing U.S. Pat. App. Pub. No. 2006/0208396, which is the publication of U.S. Application No. 10/546,455 cited in the Office Action dated January 22, 2007; and U.S. Pat. No. 7,172,724, which is the patent issued from U.S. Application No. 10/304,963 cited in the Office Action dated January 22, 2007.

Applicants respectfully request the Examiner to consider the documents cited in the Completion of Record by returning initialed copies of the Form PTO-1449 submitted herewith.

**RESPONSE TO CLAIM REJECTIONS**

**1. Response to Rejections under 35 U.S.C. § 112, first and second paragraph**

The Office Action contains the following rejections under 35 U.S.C. § 112:

- (a) Claims 1, 4-7, and 9-13 are rejected under 35 U.S.C. § 112, first paragraph, as failing to comply with the enablement requirement;

- (b) Claims 1, 4-7, and 9-13 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In rejection (a), the Office Action submits that claims 1, 4-7, and 9-13 are not enabled on the grounds that the claims contain subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. In particular, the Office Action submits that the originally filed specification fails to state or teach one of ordinary skill in the art how:

- a concave portion is formed on a lower part of a sintered block (claims 1 and 9, lines 8-9),
- an upper surface of a concave portion formed on the sides of a sintered block can be declined from the outside towards the inside (claim 9, lines 9-10),
- a concave portion surface of a lower part of a sintered block accepts a hanging portion of an excess portion (claim 1, lines 10-11 and claim 9, lines 11-12),
- an excess portion from a surface of a sintered block is removed without also removing a hanging portion (claim 1, lines 12-13 and claim 9, lines 13-14).

In rejection (a), the Examiner has merely made a naked assertion, and has not provided any support therefor. The Examiner has set forth the contention that the that the originally filed specification fails to state or teach one of ordinary skill in the art how to carry out the above-noted process. However, the Examiner has not set forth any basis for this contention.

The Examiner is reminded that what is material is whether one having ordinary skill in the art would be required to perform undue experimentation to determine which materials would be included within Applicants' claimed invention.

As stated in In re Wands, 8 U.S.P.Q.2d 1400, 1404 (Fed. Cir. 1988):

Enablement is not precluded by the necessity for some experimentation such as routine screening. However, experimentation needed to practice the invention must not be undue experimentation. "the key word is 'undue,' not 'experimentation.'"

Wands states that the factors to be considered in determining whether a disclosure would require undue experimentation have been summarized by the board in Ex parte Forman, 230 U.S.P.Q. at 547. In particular, the Examiner is reminded that these include (1) the quantity of experimentation, (2) the amount of direction or guidance presented, (3) the presence or absence of working examples, (4) the nature of the invention, (5) the state of the prior art, (6) the relative skill of those in the art, (7) the predictability or unpredictability of the art, and (8) the breadth of the claims.

Weighing these factors under the present circumstances clearly demonstrates that the 35 U.S.C. § 112, first paragraph, enablement rejection is improper and should be withdrawn. In this regard, (a) the quantity of experimentation would be low, (b) there is sufficient direction presented, (c) working examples are provided, and (d) the relative skill in the art, the nature of the invention, and the claim language are sufficiently related that undue experimentation would not be required to practice the disclosed and claimed invention.

Further, the Court of Customs and Patent Appeals referring to previous decisions stated in In re Anderson, 176 U.S.P.Q. 331, 333:

There is no doubt that a patentee's invention may be broader than the particular embodiment shown in his specification. A patentee is not only entitled to narrow claims particularly directed to the preferred embodiment, but also to broad claims which define the invention without a reference to specific instrumentalities.

Additionally, the Court indicated in Anderson that claims are not too broad merely because they are not somehow limited to operative or suitable medicaments, even though there may exist some medicaments that may be unsuited to use in the dressing of the invention.

With the above in mind, Applicants point out that the specification provides sufficient guidelines whereby one having ordinary skill in the art can practice the disclosed and claimed invention with, at most, minimal experimentation so as to ascertain which alloys correspond to Applicant's claimed invention. In this regard, the Examiner's attention is directed to page 15, line 23 to page 18, line 22 of Applicant's specification, in addition to Figs. 2A and 2B (*e.g.*, depicting the concave-type block in claim 1) and Figs. 1A and 1B (*e.g.*, depicting the inclined-type block in claim 9), which provide examples of what must be considered a reasonable description to support the claimed invention.

Unless the Examiner has strong support to rebut Applicant's claimed invention, then a 35 U.S.C. § 112 rejection is not proper. Here, the Office action fails to provide any other arguments other than that the claimed recitations are not enabled by the

disclosure. (see, e.g., Office Action, p. 3). However, as discussed above, one having ordinary skill in the art following Applicants teachings would readily be capable of making and using the claimed invention with, at most, minimal experimentation. Therefore, the 35 U.S.C. 112, first paragraph, rejection is improper and should be withdrawn.

Applicants respectfully submit that the claimed invention is enabling such at one having ordinary skill in the art can make and/or use the invention. For example, referring to the recitations pointed to in the Office Action, Applicants note that method of making a three dimensional object includes a sintered block made from a plurality of sintered layers. In this regard, the lower layer which constitutes the sintered block is adapted such that the outline of the section is located inside of the target shape. Thus, whenever repeating lamination of the sintered layer from the lower layer to the upper layer, the outlines of the section are located more outside of the target shape. As a result, the outline of the section of the upper layer comes to be located more outside, and the outline of the section of the sintered block comes to throw out to the outside as it goes to the upper layer from the lower layer which constitutes the sintered block.

In view of the foregoing, Applicants respectfully submit that claims 1, 4-7, and 9-13 are enabling under 35 U.S.C. § 112, first paragraph, and therefore the rejection should be withdrawn.

In rejection (b), the Office Action submits that claims 1, 4-7, and 9-13 are indefinite on the grounds that the following expressions are indefinite for failing to

particularly point out and distinctly claim the subject matter which applicant regards as the invention because it is not clear what applicant intends to cover by such recitations:

- “the sides of the sintered block including a concave portion is formed on a lower part of a sintered block” (claims 1 and 9, lines 8-9),
- “accepting a hanging portion of an excess portion by the concave portion surface of the lower part of the sintered block” (claim 1, lines 10-11; claim 9, lines 11-12),
- “removing the excess portion from a surface of the sintered block” (claim 1, lines 12-13; claim 9, lines 13-14), and
- “the sides of the sintered block including a concave portion wherein an upper surface of the concave portion is declined from the outside toward the inside” (claim 9, lines 8-10).

In response to rejection (b), Applicants respectfully submit that the claimed invention is clear and definite such that one having ordinary skill in the art can make and/or use the invention.

For example, referring to the recitations pointed to in the Office Action, Applicants note that the claimed method of making a three dimensional object deal with, *inter alia*, the removal of an excess sintered portion. More specifically, the outer size of the lower sintering layer is typically dimensioned smaller than the layer to be sintered, and the side of the sintered block is formed for the inclined or stepped concave portion (*i.e.*, eave). Thus, the inclined or stepped concave portion can accept the excess sintered portion.

In view of the foregoing, Applicants respectfully submit that claims 1, 4-7, and 9-13 are clear and definite under 35 U.S.C. § 112, second paragraph, and therefore the rejection should be withdrawn.

## 2. Response to Obviousness-type Double Patenting Rejections

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The Office Action contains the following obviousness-type double patenting rejections:

- (a) Claim 8 is provisionally rejected on the grounds of obviousness-type double patenting as being unpatentable over claims 3, 4, and 6-12 of copending application No. 10/304,963 (now claims 1, 2, and 3-9, respectively of U.S. Pat. No. 7,172,724 (“ABE-1”)) in view of DE 19953000 (“EXNER”);
- (b) Claim 8 is provisionally rejected on the grounds of obviousness-type double patenting as being unpatentable over claims 3, 4, and 6-12 of copending application No. 10/546,455 (“ABE-2”) in view of DE 19953000 (“EXNER”); and
- (c) Claim 8 is rejected under the judicially created doctrine of Obviousness-type double patenting as being unpatentable over claims 2-15 of U.S. Pat. No. 6,657,155 B2 (“ABE-3”) in view of DE 19953000 (“EXNER”).

Applicants respectfully request withdrawal of the obviousness-type double patenting rejections of claim 8 in view of the following remarks.

Applicants respectfully submit that claim 8 is not obvious in view of ABE-1, ABE-2, or ABE-3, and further in view of EXNER. For example, Applicants submit that ABE-1, ABE-2, and ABE-3 do not claim an “inorganic material.” Moreover, the Office Action fails to provide sufficient motivation as to why the claimed recitations not claimed in ABE-1, ABE-2, and ABE-3, and further in view of EXNER would have been obvious. Specifically, Applicants submit that the assertions in the Office Action that ABE-1, ABE-2, and ABE-3 claim generically a “powder material” and thus would encompass an “inorganic powder material” as in claim 8 is insufficient to find obviousness double patenting. As previously submitted, ABE-1, ABE-2, and ABE-3 **DO NOT CLAIM** an

“inorganic material,” and for at least this reason the obviousness double patenting rejections should be withdrawn. Applicants further submit that the secondary document of EXNER does not correct the deficiencies of ABE-1, ABE-2, or ABE-3.

Moreover, Applicants respectfully submit that the secondary document of EXNER has been improperly applied in combination with ABE-1, ABE-2, or ABE-3, in that these documents in combination with EXNER still fails to make obvious claim 8. In this regard, EXNER discloses irradiation of a “zig-zag” pattern in a variable contour mask (see, e.g., pattern formed from beam 8 in EXNER), whereas claim 8 requires at least a “irradiating an optical beam along an outline.” Thus, because the “zig-zag” of EXNER is different than the “outline” of claim 8, the combination of EXNER with ABE-1, ABE-2, or ABE-3 does not provide a proper obviousness-type double patenting rejection, and therefore the rejections should be withdrawn.

In addition, Applicants note numerous differences between the claims of ABE-1, ABE-2, and ABE-3, and claim 8 of this application. For example, regarding rejection (a) (ABE-1 and further in view of EXNER), Applicants submit that claim 8 is different from ABE-1 and further in view of EXNER. In particular, ABE-1 is designed so that a part of the excess sintered portion will remain at the following removal process, rather than all of the excess sintered portion being removed at the following removal process as claimed. That is, the excess sintered portion is removed in the form having also the portion of “MI” (excess sintered portion hanging down even to the lower lamination body by laser sintering) in the side of the lamination body, as shown for example in Fig. 1C in ABE-1.



Therefore, in view of the above differences, Applicants submit that claim 8 is different and distinct from claims 1-9 of ABE-1, and further in view of EXNER, and the obviousness-type double patenting rejection should be withdrawn.

With regard to rejection (b) (ABE-2 and further in view of EXNER), Applicants submit that claim 8 of the present application does not claim an “abnormally sintered part” and thus for at least this reason, the obviousness-type double patenting rejection should be withdrawn. Applicants respectfully note that in ABE-2, the “abnormally sintered part” is typically formed in the sputtering by irradiation of the laser onto the powder layer, and the adhesion of the removed powder. Thus, existence of the “abnormally sintered part” causes trouble in the powder supply, to hit the braid for the powder supply. Therefore, in view of the foregoing, the “abnormally sintered part” in ABE-2 is different from claim 8 of the present application, and thus the obvious-type double patenting rejection should be withdrawn.

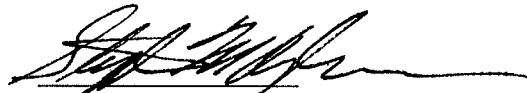
Therefore, in view of the foregoing, Applicants respectfully request withdrawal of the obviousness-type double patenting rejections of claim 8.

### **CONCLUSION**

In view of the foregoing, the Examiner is respectfully requested to reconsider and withdraw the rejections of record, and allow each of the pending claims. Applicant therefore respectfully requests that an early indication of allowance of the application be indicated by the mailing of the Notices of Allowance and Allowability.

Should the Examiner have any questions regarding this application, the Examiner is invited to contact the undersigned at the below-listed telephone number.

Respectfully Submitted,  
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